

# Addition/Subtraction of Radicals

$$2x + 3x = 5x$$

$$3y + 6y = 9y$$

$$\text{ex } 2\sqrt{3} + 3\sqrt{3} = 5\sqrt{3}$$

$$4\sqrt{7} + 6\sqrt{7} = 10\sqrt{7}$$

$$\text{ex } \underline{2\sqrt{5}} + \underline{5\sqrt{6}}$$

CANNOT ADD or SUBTRACT

$$\text{ex } 3\sqrt{5} + 8\sqrt{5} - 2\sqrt{5} = 9\sqrt{5}$$

$$\text{ex } 5\sqrt{2} - 8\sqrt{2} + 7\sqrt{3} =$$

$$\underline{-3\sqrt{2} + 7\sqrt{3}}$$

$$\text{ex } \sqrt{8} + 5\sqrt{2}$$

Simplify 1st!

$$2\sqrt{2} + 5\sqrt{2}$$

$$\underline{7\sqrt{2}}$$

$$\begin{array}{r} 8 \\ 4 \overline{) 32} \\ \underline{22} \end{array}$$

ex

$$\sqrt{24} - \sqrt{150}$$

$$24 \quad 2\sqrt{6} - 5\sqrt{6}$$

$$\begin{array}{c} 24 \\ \swarrow \searrow \\ 2 \quad 12 \\ \swarrow \searrow \\ 2 \quad 6 \\ \boxed{2} \quad \boxed{3} \end{array}$$

$$\textcircled{-3\sqrt{6}}$$

$$150$$

$$\begin{array}{c} \wedge \\ 6 \quad 25 \\ \textcircled{3} \textcircled{2} \quad \textcircled{5} \textcircled{5} \end{array}$$

Do

$$\textcircled{1} \sqrt{45} - \sqrt{80}$$

$$9 \quad 3\sqrt{5} - 4\sqrt{5}$$

$$\begin{array}{c} 9 \quad 5 \\ \textcircled{3} \quad \boxed{5} \end{array}$$

$$-1\sqrt{5}$$

$$80$$

$$\begin{array}{c} \wedge \\ 16 \quad 5 \\ \textcircled{5} \textcircled{2} \quad \textcircled{4} \textcircled{2} \end{array}$$